

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-2. (Canceled)
3. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion (V_s) in the passenger compartment of the vehicle.
4. (Original) Method according to Claim 3, characterized in that the size of the circulating air portion (V_s) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.
5. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) increases the circulating air portion (V_s) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.
6. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) is a part of a cooling/heating device.
- 7-8. (Canceled)
9. (Currently Amended) Method according to Claim 1 21, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) adjusts the circulating air portion (V_s) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.

10-12. (Canceled)

13. (Currently Amended) System Sensor according to Claim 44 22, characterized in that the CO₂ sensor for detecting hazardous gas concentrations in the passenger compartment and the temperature sensor for temperature compensation form a structural unit.

14. (Canceled)

15. (Currently Amended) System Sensor according to Claim 44 22, characterized in that the control unit for the circulating air and/or intake air portion controls the size of the circulating air portion (V_s) in the passenger compartment of the vehicle.

16. (Currently Amended) System Sensor according to Claim 15, characterized in that the size of the circulating air portion (V_s) in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment.

17. (Currently Amended) System Sensor according to Claim 44 22, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) increases the circulating air portion (V_s) in the passenger compartment when there is an increase in the outside temperature of the passenger compartment.

18. (Currently Amended) System Sensor according to Claim 44 22, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) is a part of a cooling/heating device.

19. (Canceled)

20. (Currently Amended) System ~~Sensor~~ according to Claim ~~11~~ 22, characterized in that the control unit for the circulating air and/or intake air portion (V_s , V_o) adjusts the circulating air portion (V_s) in the passenger compartment to approx. 80% when a person is located in the passenger compartment.

21. (New) Method to regulate a circulating air and/or intake air portion (V_s , V_o) in a passenger compartment of a vehicle, the method comprising:

detecting a hazardous gas concentration of CO_2 in the passenger compartment according to the principle of photometric gas measurement at wavelengths of $4.2\ \mu\text{m}$ and $4.3\ \mu\text{m}$ and at a reference wavelength of between $3.8\ \mu\text{m}$ and $4.0\ \mu\text{m}$;

sensing a temperature;

generating a triggering signal (I_{CO_2}) based on the detected hazardous gas concentration;

compensating the triggering signal (I_{CO_2}) based on the sensed temperature;

supplying the temperature-compensated triggering signal (I_{CO_2}) to a control unit for the circulating air and/or intake air portion (V_s , V_o) in a passenger compartment;

supplying a temperature signal (I_t) from a sensor for sensing the temperature to the control unit;

with the control unit, regulating the circulating air and/or intake air portion (V_s , V_o) in the passenger compartment based on the temperature-compensated triggering signal (I_{CO_2}) and based on the temperature signal (I_t), the control unit inducing the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), the hazardous gas concentration threshold value (CL) in the passenger compartment being selected at approximately 0.2% by volume CO_2 .

22. (New) System for regulating a circulating air and/or intake air portion (V_s , V_o) in a passenger compartment of a motor vehicle, the system comprising:

a control unit for the circulating air and/or intake air portion (V_s , V_o) in the passenger compartment;

a temperature sensor for sensing a temperature, the temperature sensor generating a temperature signal (I_t);

a CO₂ sensor for detecting hazardous gas concentrations in the passenger compartment, a CO₂ concentration in the passenger compartment being measured by the CO₂ sensor via a wavelength-specific weakening of electromagnetic radiation in the infrared range, the CO₂ sensor detecting the CO₂ concentration in the passenger compartment according to the principle of photometric gas measurement at wavelengths of 4.2 μm and 4.3 μm and at a reference wavelength of between 3.8 μm and 4.0 μm , the CO₂ sensor generating a triggering signal (I_{CO_2}), the triggering signal (I_{CO_2}) being temperature-compensated based on the sensed temperature;

wherein the control unit regulates the circulating air and/or intake air portion (V_s , V_o) in the passenger compartment based on the temperature-compensated triggering signal (I_{CO_2}) and based on the temperature signal (I_t), the control unit inducing the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (CL), the hazardous gas concentration threshold value (CL) in the passenger compartment being selected at approximately 0.2% by volume CO₂.